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MAY 02 2007

Atty. Docket No. 2000-0086-15  
USSN 10/820,261

## Remarks

Claims 15-49 are active and pending in the present application.

Claims 15-17 and 46-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 05-167172 to Osamu et al. (hereinafter, *Osamu*). Applicants' independent claims relate to methods of bandwidth control of a narrow band gas discharge laser having a grating based line narrowing unit with a grating defining a grating face. Applicants have amended claims 15 and 46 in order to clarify and particularly point out that forcing a flow of gas across a grating face is to stabilize the bandwidth of a narrow band gas discharge laser. Support for amendments to Claims 15 and 46 may be found, for example, on pages 8 and 10-11 of Applicants' specification, as well as in FIGS. 4A, 4B, 5B, and 11-12. For example, FIG. 3 illustrates adverse effects on bandwidth of a hot gas layer on the face of a line narrowing grating, and FIG. 5B illustrates improved stabilization in the bandwidth using the method of Applicants' claimed invention.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference. See MPEP § 2142. See also, *In re Vacek*, 947 F. 2d 488 (Fed. Cir. 1991). Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the *nature of the problem to be solved* as a whole would have been suggested to those of ordinary skill in the art. *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). See also, MPEP § 2143. Finally, the prior art reference must teach or suggest all the claimed limitations. MPEP § 2142 and § 2143.

The Office Action states that it would have been obvious to one of ordinary skill in the art at the time of invention to use the "technique of spraying a gas directly on the narrow band of components, as described in the conventional prior art because it will prolong the life of the component." Office Action, page 3. The conventional prior art indicated in *Osamu* in paragraphs [0002] and [0003] identifies that a purge gas is sprayed on the optical elements to reduce thermal load or to prolong narrow-band component life. As stated above, Applicants' claimed invention relates to forcing a flow of gas across a grating face to stabilize the *bandwidth* of a narrow band gas discharge laser. Applicants contend that *Osamu* does not show, suggest, or

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motivate one of skill in the art to produce Applicants' claimed invention that improves bandwidth control and stabilization of a narrow band gas discharge laser. Although the April 27, 2007 Advisory Action states that *Osamu* "does suggest stabilization of the *wavelength* in paragraph [0018]" (Advisory Action, page 2 (emphasis added)), Applicants submit that independent claims 15 and 46 relate to a method that stabilizes the *bandwidth*. Thus, Applicants contend that *Osamu* does not suggest the features of Applicants' claimed invention. Accordingly, Applicants submit that claims 15-17 and 46-48 are in condition for allowance.

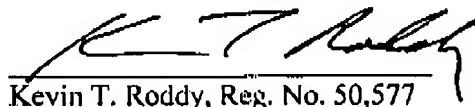
Moreover, Applicants contend that the conventional art referred to in *Osamu* addresses an entirely different problem from that addressed by Applicants' claimed invention. *Osamu* addresses reduction of the thermal load or prolonging the narrow-band component life – not stabilization of bandwidth. Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness has not been made. Applicants therefore submit that claims 15-17 and 46-48 are in condition for allowance.

Claims 15-49 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,778,584. Applicants previously submitted a terminal disclaimer on April 6, 2007 to obviate these claim rejections.

In view of the above remarks and amendments, Applicants believe claims 15-49 are in condition for allowance and passage of this case to issue is respectfully solicited.

Applicants authorize the Commissioner to charge the total amount of \$1540.00 to our Deposit Account No. 03-4060 which includes the RCE fee of \$790.00 and the additional claim fee of \$750.00. Applicants do not believe any other fees are due, however if any other fees are due the Commissioner is authorized to charge our Deposit Account No. 03-4060 the appropriate amount.

Respectfully submitted,

  
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